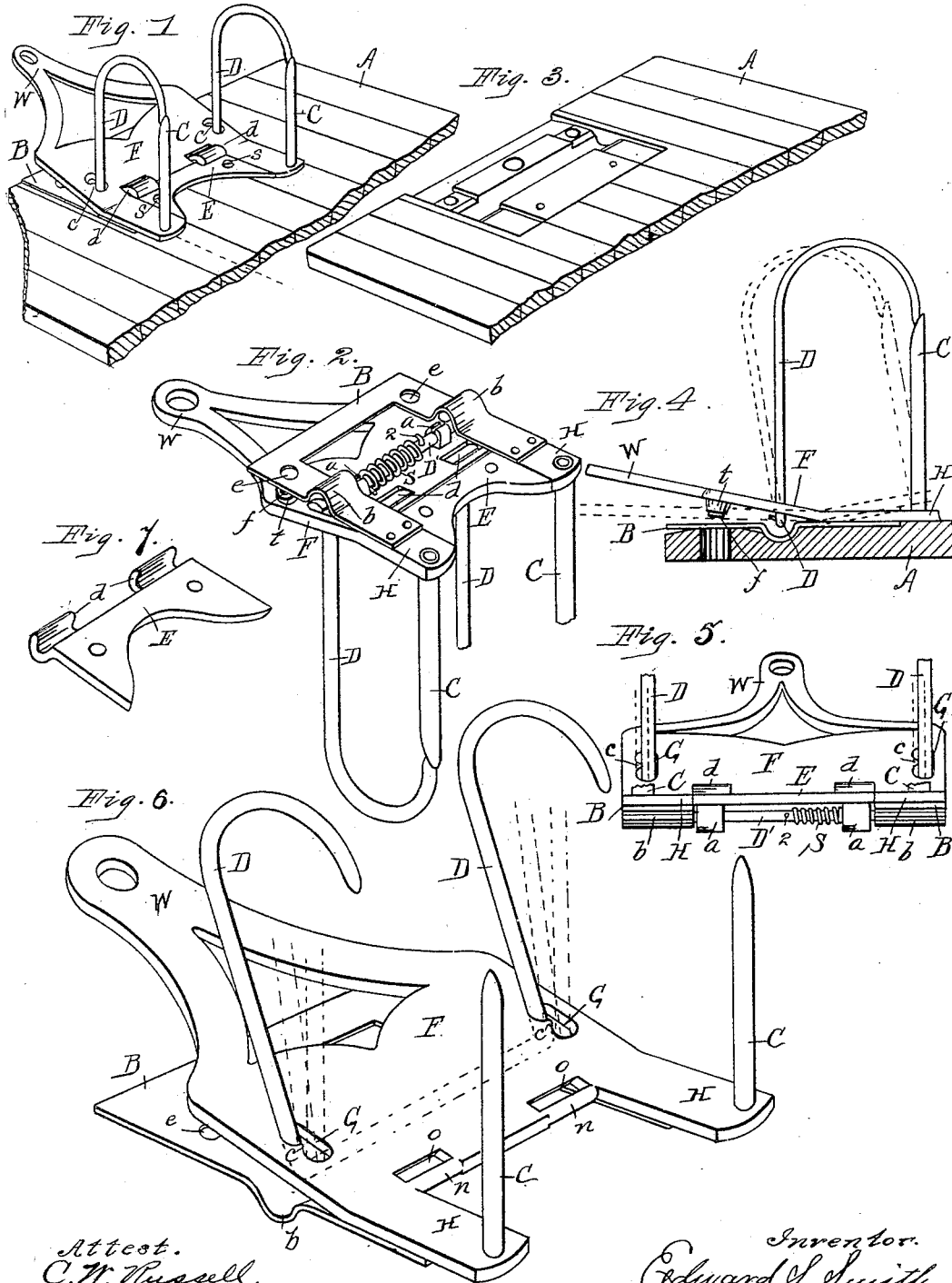


(No Model.)

E. S. SMITH.  
LETTER FILE AND PERFORATOR.

No. 419,160.

Patented Jan. 7, 1890.



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# UNITED STATES PATENT OFFICE.

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## LETTER FILE AND PERFORATOR.

SPECIFICATION forming part of Letters Patent No. 419,160, dated January 7, 1890.

Application filed March 30, 1889. Serial No. 305,472. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD S. SMITH, a citizen of the United States, residing at Ovid, in the county of Clinton and State of Michigan, have invented certain new and useful Improvements in Letter File and Perforators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to a combined letter file and perforator; and it consists in the construction and arrangement of parts whereby the letter or bill to be filed may be perforated so as to freely pass on the filing-tubes, and a further arrangement of parts permitting the letters or bills on the file to be readily looked over and the one desired easily removed without removing any of the other bills or letters on the file, affording a cheap and durable letter-file and one that is reliable in its operation, all of which will be fully hereinafter set forth, and the features pointed out particularly in the claims.

In the accompanying drawings, forming a part of the specification, Figure 1 is a view of my improved file attached to a base, said base being broken away. Fig. 2 is an inverted view of the file with the base removed. Fig. 3 is a view of a section of the base having the file removed, showing the cut-out portions in the base that receive the file. Fig. 4 is a cross-section on dotted line of Fig. 1. Fig. 5 is a view in end elevation, the base being removed and the filing-tubes broken away. Fig. 6 is an enlarged isometrical view of the file without the base, showing the hinge-plate removed, and the rocking wires rocked back. Fig. 7 is an inverted view of the detached hinge-plate.

As indicated in the drawings, A represents the base; F, the file-plate; C, the filing-tubes; D, the receiving rocking wires; E, the hinge-plate; S, the spring, and B the spring-plate. The file-plate F is provided with the extensions H H, having the file-tubes C C mounted thereon, said plate also having the B-shaped

openings G G therein, the slots o o, and pintles n n, for purposes hereinafter described. The rocking wires are formed of one piece and the right-angle portion D', which crosses the under face of the plate F transversely, is secured to said under face by passing through the lugs a a. Said lugs are riveted to the under face of the plate F and form journal-bearings in which the wire D' oscillates. (See Fig. 2.) The spiral spring S environs the wire D', one end being secured thereto by passing through said wire, as shown at 2 in Figs. 2 and 5, the other end of said spring abutting against the lug a, (see Figs. 2 and 5,) the spring S being slightly compressed, whereby a lateral tension is maintained on the wire D'. The rocking wires D pass up through the openings G in the plate F, their arched ends resting against the points of the filing-tubes C, as shown in Fig. 1. The spring-plate B is secured to the under face of the extensions H H of the plate F, said spring-plate having the bent portions b b and holes e e. The hooks d d on the hinge-plate E enter the slots o o in the file-plate F and engage around the pintles n n of said plate, (see Figs. 1, 6, and 7,) and when said plate E is secured by the screws s s the file becomes hinged to the base A, as clearly shown in Fig. 1. The under face of the plate F is provided on each side with the punch or die f, carrying the rubber or elastic collar t. Said dies are set to register with and enter the holes e in the spring-plate B, and afford the means for perforating the letter or bill to be filed so that it will pass freely on the filing-tubes C C.

The operation is as follows: The file and perforator constructed as described is mounted on the base A by securing the hinge-plate E to said base by means of the screws s s, as clearly shown in Fig. 1. The bill or letter to be filed is placed beneath the rear end of the file-plate F under the dies f. A quick downward force applied to the handle W will cause the dies to pass through said bill, cutting round clean holes therein, the rubber collar t freeing the bill from the dies after cutting. In the act of cutting, the plate F oscillates on the pintles n n, raising the outer ends of the extensions H H, and carrying up the ends of the spring-plate B, as clearly

shown by dotted lines in Fig. 4. When the pressure on the handle W is released, the spring-plate B will draw down the extensions H H and return the plate F to the position shown in Fig. 1 and by solid lines in Fig. 4. To file the bill on the filing-tubes C, the wires D are rocked back to the position shown in Fig. 6, when the bill may be readily placed on said tubes. It will be observed that by the formation of the openings G in the plate F, through which the wires D pass as said wires are rocked back, they move laterally in passing the projection *c* in said openings, and that such lateral motion forces the spring S against the lug *a*, compressing it, as clearly shown in Fig. 5. As the wires D pass the point *c* the tension of the spring S will force the wires into the enlarged opening beyond the point and hold them there, as shown in Fig. 6. In rocking the wires D forward the same action takes place, the tension of the spring S holding the wires D in either position back, or forward, until sufficient force is applied in rocking them to overcome the force of the spring. When in position shown in Fig. 1, the arched ends of the wires D lie in the beveled points of the tubes C, so that the letters or bills may be freely passed from said tubes onto the wires D. Desiring to remove a bill from the file, (and should it be under other bills,) those that are on top are passed onto the rocking wires D, said wires rocked back, and the bill removed, the wires rocked forward, and the other bills replaced as before. This, it will be observed, may be done without removing any bills from the file but the one wanted.

The above-described invention is simple, cheap, and durable, embodying in one device a complete file and perforator.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the base, the file-plate hinged to said base, the spring-plate B, attached to the under face of said file-plate, said spring-plate having holes therein that register with and receive the dies on the under face of the file-plate, as and for the purposes specified.

2. The combination and arrangement, as described, of the rocking wires formed of a continuous piece, the right-angle portion D', crossing the under face of the file-plate transversely and being journaled thereto by means of the lugs *a a*, the upright portions D of the rocking wires passing through the openings G in the file-plate, said openings being of substantially B shape, whereby, when acted upon by the spiral spring S, said rocking wires are held against the filing-tubes, or when rocked back are secured in that position, as and for the purposes specified.

3. In a combined letter file and perforator, the combination, with the base, of the file-plate hinged thereto, said plate having the extensions H H, with the file-tubes mounted thereon, the B-shaped openings G and dies *f*, the spring-plate attached to the under face of the file-plate, having holes *e e*, the rocking wires, spiral spring, and lugs *a a*, arranged to operate as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD S. SMITH.

Witnesses:

R. C. DAVIES,  
J. E. LUDWICK.